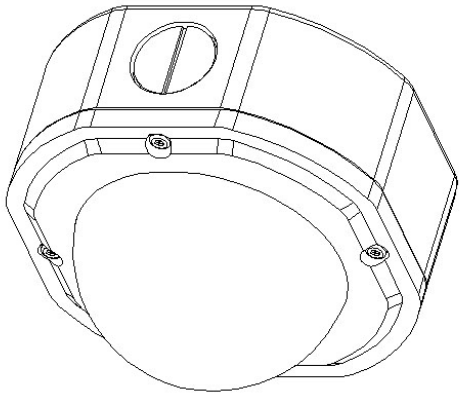
EHD150

1/3” B/W Rugged Dome Camera

User’s Manual

and

Operation Instructions



Notice

This manual is presented to the users of EHD150 by EverFocus Electronics Corp. With years of engineering researches, EverFocus has spared no effort to provide the high quality products to the worldwide users. For the policy of continual product improvement, EverFocus reserves the right to make changes to the product specifications and documentation without notice. All the components of the products, including accessories, components, and outlook, are based on the agreements of each deals to satisfy all kinds of users. Meanwhile, please be advised that every step of operation must follow the instruction of this manual to keep EHD150 working under the best condition. Please notice that EverFocus will not be charged any claims or renewing cases resulted from inappropriate operation.

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Safety Warning

1. **Do not install the camera near electric or magnetic fields.**

   Installed the camera away from TV, radio transmitter, magnet, electric motor, transformer, audio speakers because the magnetic fields generate from above devices will distort the video image.

2. **Do not install the camera in the high temperature environment.**

   Installed the camera away from stoves, or other heat generating devices as the high temperature could cause deformation, discoloration or other damages of the camera. Install the camera at where the temperature range will stay between -46□ to 50□ (-50□ to 122□).

3. **Never face the camera toward the sun.**

   Never aim the camera at the sun or other extremely bright objects whether it is in use or not.

4. **Cleaning**

   Do not touch the surface of CCD sensor by hand directly. Use a soft cloth to remove the dirt from the camera body. Use lens tissue or a cotton tipped applicator and ethanol to clean the CCD sensor and the camera lens. When the camera is not in use, put the cover cap on the lens mount.

5. **Heater**

   Heater elements could be very hot!! Heaters are located inside the camera housing and will active automatically while the environment temperature is below 10□. Do not touch the heater element while it's active.

Introduction

The most technically advanced EHD150 is the newest vandal-resistant B/W Rugged Dome Camera from EverFocus Electronics. The B/W Rugged Dome Camera can withstand a blow from a 10-pound sledgehammer and has a built-in heater that allows for operation in low temperatures. It is perfect for all high-profile crime-prone applications such as building entrances, retail stores, and shopping malls. The extremely EHD150 is unquestionably one of the world's toughest cameras and is your best choice for vandal resistance.

Main Features :

- Designed with advanced digital signal processing circuitry for high image quality.
- The high sensitivity of 0.06 lux/F=1.6 is achieved by high –resolution 1/3” interline transfer CCD.
- DC12V or AC24V switches automatically power supply; Line Lock for AC24V.
- S/N Ratio reaches 48 dB or more.
- Both board lens and vari-focal lens (3.5~8mm or 9~22mm) are available.
- Compact size: 130mm x 130 mm x 98.9mm
- Polycarbonate base withstand the impact of a 10 pounds sledgehammer, smoke color or clear as option.
- Unique security screw locked
- Operating temperature –46 ~ +50 deg Celsius.
- Heater triggered when temperature less than 10 deg Celsius.

Specification

Pickup device:	1/3” interline transfer CCD
Picture element:	NTSC :768(H) × 494(V)
	PAL: 752(H)×582(V)
Horizontal resolution:	560 TV lines
Sensitivity:	0.06 lux / F=1.6
S/N ratio:	>48dB(AGC off)
Weatherproof ratings:	IP66
Electronic shutter:	1/60(1/50)~1/100,000(Board lens only)
IRIS Control:	Auto (vari-focal lens only)
Auto gain control:	on/off switch
Back light comp:	on/off switch
Line Lock:	on/off switch for 24VAC
Gamma correction:	0.45
Video output:	1.0Vp-p,75ohm
Power source:	12VDC+/-10%, 24VAC+/-10%
Power Consumption:	5W Max.
	(15W when heater active; thermostatically controlled)
Sync.mode:	Internal Sync. /Line lock (Only AC24V)
Dimension:	130mm x 130mm x 98.9mm
Lens:	Board lens f=3.6, F=2.0
	Vari-focal F=3.5~8mm, F=1.6
Heater auto activated temperature:	10□, Heater optional
Operating temperature:	-46□ to +50□
Weight:	1.7kg

Installation Instructions

1. Loosen the 4 fix screws on the housing cover by using the attached wrench (Figure 1). Carefully uncap the housing cover as the direction shown below (Figure 2), please pay attention not to damage the lens. To remove the housing cover, push the hinges to the bottom of the bracket, the hinges can be easilv removed from the bracket.

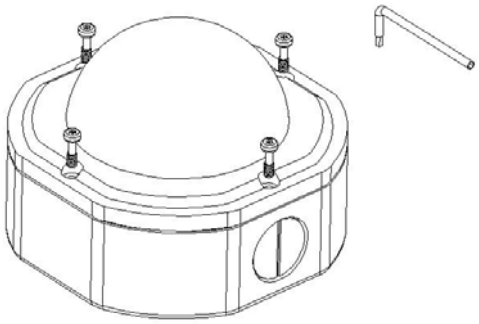

Figure 1

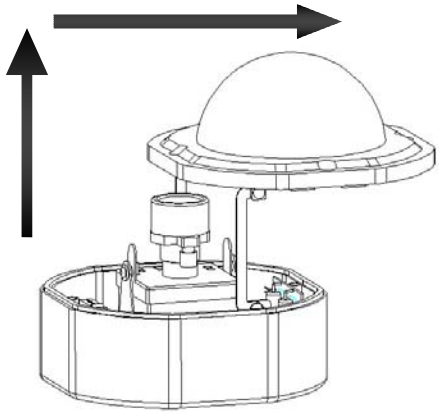

Figure 2

2. Remove the camera.

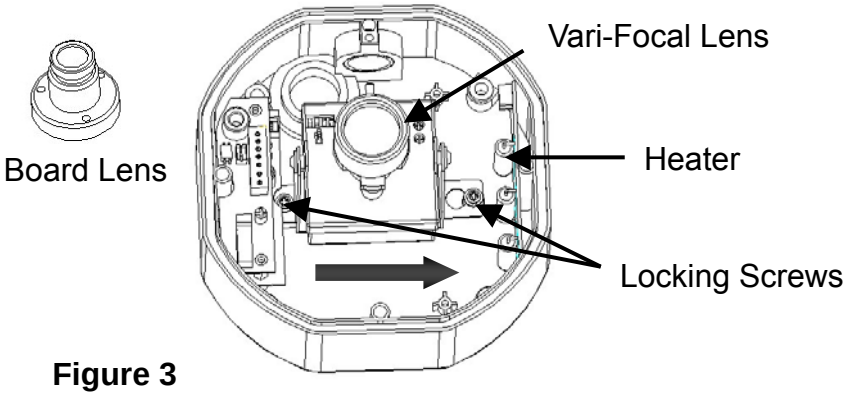

Figure 3

To remove the camera, first unplug the wire connection on the back of the camera. Then loosen the 2 locking screws on the camera base, push the camera base to the right (toward heater direction, as shown in Figure 3), remove the camera from the mounting base. Reinstall the camera and the cable while the base mounting is completed.

3. Mounting the base.

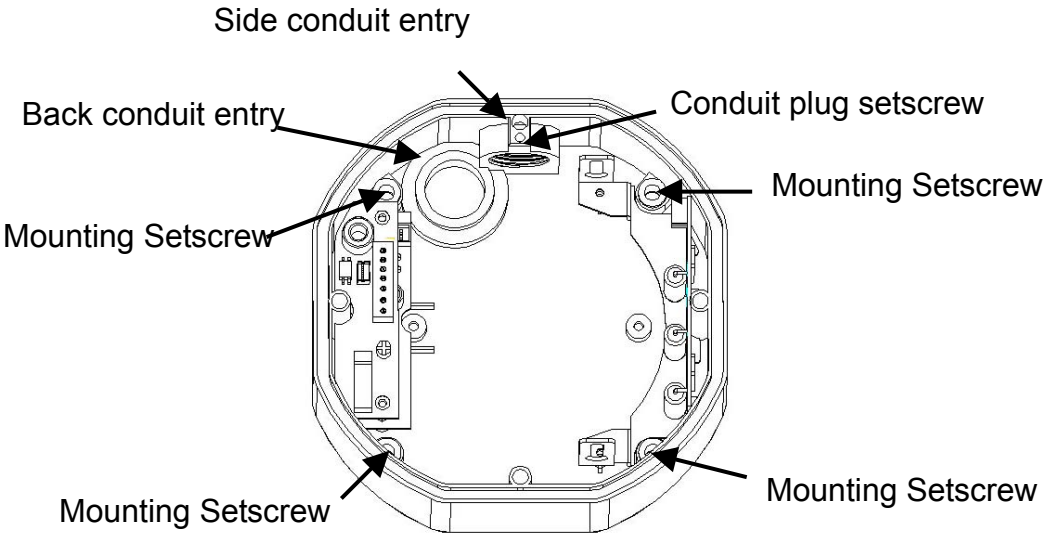

Figure 4

Attach the base to the wall or ceiling, fix the base by the 4 setscrews attached in the accessory pack. The dome is weighted 1.7kg, please make sure if the mounting is strengthened enough to support it, if not, please reinforce the mounting according to the environment.

Note: The diameter of the screw hole isψ4.7mm.

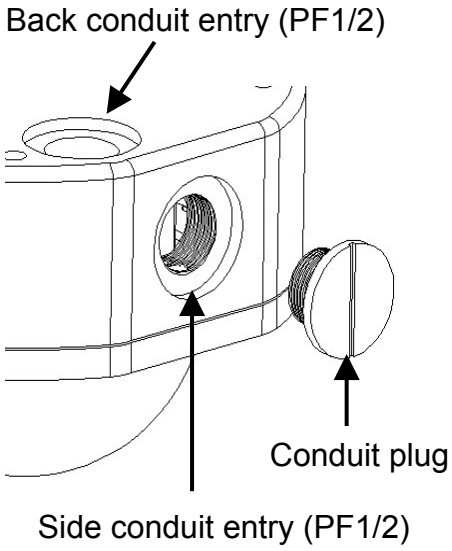

Figure 5

The camera comes with a conduit plug pre-installed in the PF 1/2 conduit entry on the side. The screw can be removed and installed in the back conduit entry. Loosen the conduit plug setscrew (as shown in Figure 5) before removing the conduit plug.

Caution: To prevent moisture leaking into the housing, apply an appropriate gasket or sealant around the conduit connection.

4. Wire Connection

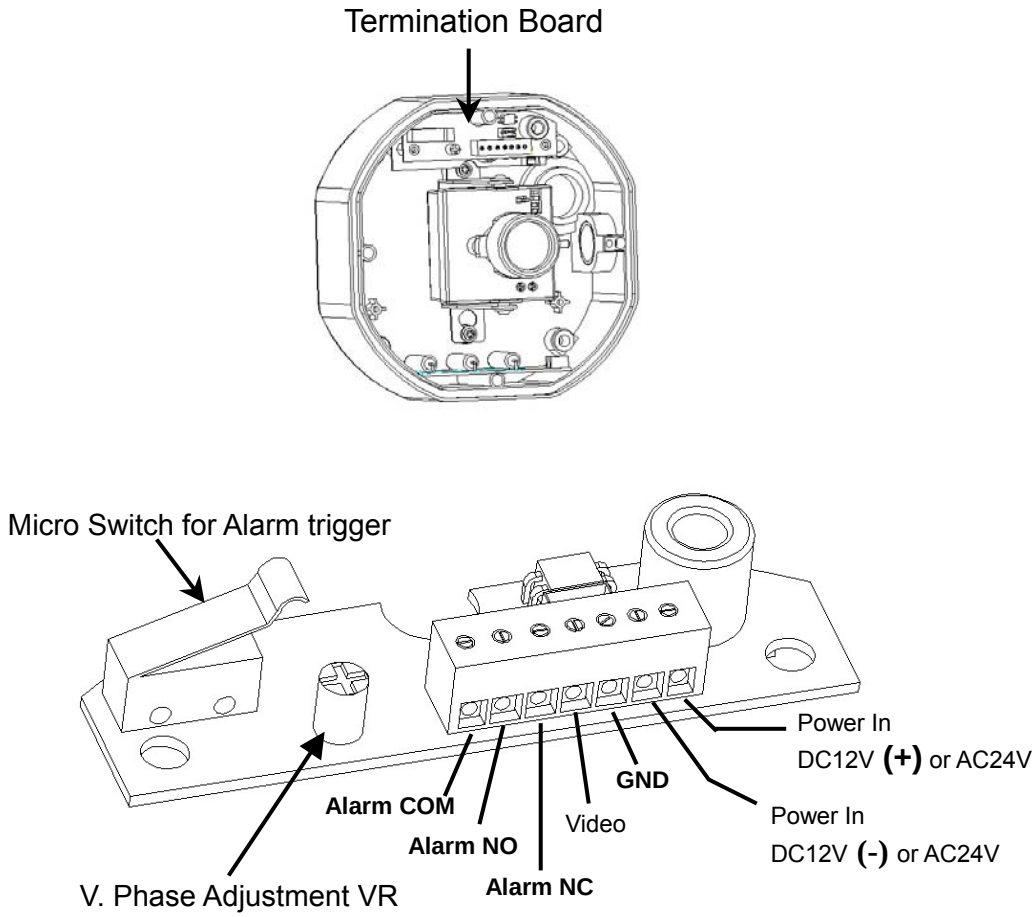

Figure 6

Connect the power supply cable (AC24V/DC12V), video output and alarm output to the proper connectors shown as Figure 6.

The V. Phase adjustment screw is located on the termination board. The vertical phase may require adjustment to synchronize the vertical phase of the camera with other camera in the system when it is to be used in the line-lock sync mode. Make the adjustment when the vertical phase of the camera does not match with other cameras.

5. View Angel Adjustment

The camera can be rotated 360□horizontally, and the vertical view angle is 140□(as shown in Figure 7). Adjust the proper camera view angel as needed. If a vari-focal lens is used, you may adjust the focus and zoom of the lens to bring the object in focus. Be sure to loosen the locking screws on the lens before you do the adjustments.

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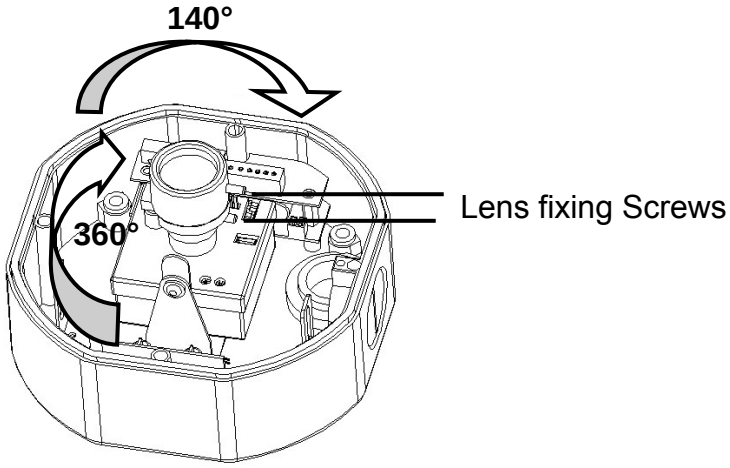
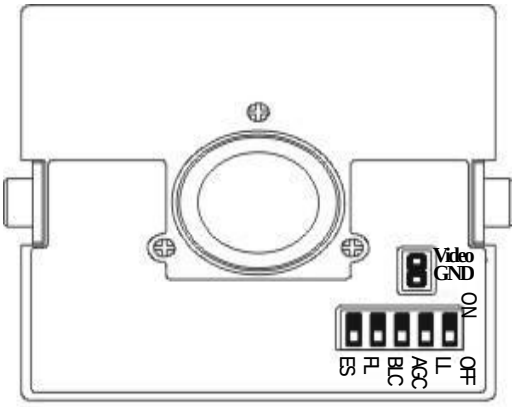
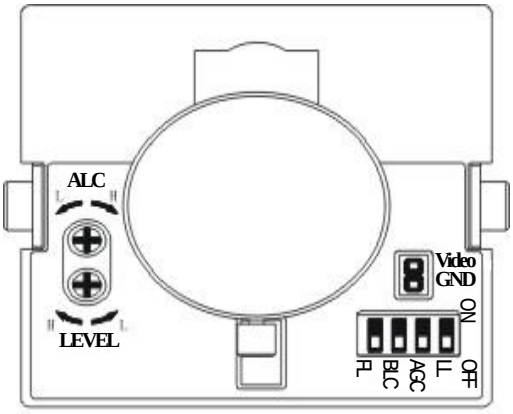


Figure 7

Dip Switch[7] Functions



Board Lens



Vari-Focal Lens

LL (Line-Lock) Off/On

To select the sync mode between Internal Sync.(LL off) and Line-Lock (LL on).

Set the line-lock off, the camera will synchronize to the internal time base. Set the line-lock on, the camera's vertical synchronization can be driven by the AC signal in the power lines.

Note: Line-Lock sync mode operation is possible only when used with an AC power source; it's not possible with a DC power source.

The default setting is ON.

AGC (Automatic Gain Control) Off/On

AGC ON: The sensitivity increases automatically when light is low.

AGC OFF: A-low-noise picture is obtained under a low light condition.

The default setting is ON.

BLC (Back Light Compensation) On/Normal

When BLC is turned on, the AGC, ES and IRIS operating point is determined by averaging over the center area instead of entire field-of-view, so that a dimly-lit foreground object at center area can be clearly distinguished from brightly-lit backgrounds.

BLC should not be used unless it is needed to compensate for back-lit.

The default setting is Normal.

FL (Flickerless Function) On/Normal

When picture flicker fiercely, turn FL on, then the camera will stabilize the speed of electronic shutter at 1/100(NTSC) or 1/120(PAL) automatically, and reduce the flicker immediately.

The default setting is Normal.

ES (Electronic Shutter) Off/On

ES ON: The camera continuously adjusts the shutter speed from 1/60 (NTSC), 1/50 (PAL) second to 1/100,000 second according to the luminance conditions of the scene.

ES OFF: The shutter speed is fixed at 1/60 (NTSC), 1/50 (PAL) second.

Set ES OFF, when auto iris lens is used or flicker is observed under a very bright fluorescent lamp. Otherwise, turn ES on for optimum performance. The default setting is ON.

IRIS Level Adjustment

Brightness Level can be adjusted from the IRIS level VR while using the direct drive lens.

- Turn counterclockwise to L to get darker picture.
- Turn clockwise to H to get brighter picture.

IRIS ALC Adjustment

To select light metering method –

- Turn the IRIS ALC Adjustment VR counterclockwise for Average Metering.
- Turn the IRIS ALC Adjustment VR clockwise for Peak Metering.

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